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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,019	02/25/2002	Masaki Hirota	FUJM 19.441 (100794-00181)	3891
26304 7590 09/13/2007 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER MILLS, DONALD L	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 09/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/090,019

Applicant(s)

HIROTA ET AL.

Examiner

Donald L. Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 7 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration, filed 29 August 2007, of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takatori (JP 05292050) in view of Takahashi et al. (US 5,680,246), hereinafter referred to as Kawasaki.

Regarding claims 1-4, 6, and 8, Takatori discloses a system and method to prevent the generation of a long fixed pattern by keeping the only one part of a frame synchronizing pattern unscrambled and scrambling the other long bits, which comprises

A step of generating a plurality of first signals and a plurality of second signals to set in a second area of a low speed frame different from a first area of said low speed frame used for frame synchronization, and said second area of said low speed frame not used for frame synchronization; A step of generating low speed frames accommodating low speed signals of

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plural channels including said first and second signals and transmission signals; A step of converting said first and second signals in said second area of each channel into either of "1/0" alternating signals, said "1/0" alternating signals being repeated patterns of bits "10" and "0/1" alternating signals, said "0/1" alternating signals being repeated patterns of bits "01"; and a step of time-division multiplexing said low speed frames accommodating said low speed signals after said step (c), thereby producing a high speed frame accommodating high speed signals; wherein said "1/0" alternating signals, and said "0/1" alternating signals are mapping to a third area of said high speed frame (Note: the Examiner interprets the claims in a broad literal reasonable sense. Therefore, the Examiner interprets the claims as relating to the traditional method and system of minimizing the generation of long fixed patterns in SONET/SDH transmission systems. Referring to Figures 1-3, a low speed overhead processing section 2 processes multiples signals (first and second signal) from a low-speed optical interface 1 and the signal are processed by a high speed overhead processing section 3. A frame synchronizing pattern addition section 4 adds frame synchronizing patterns and a scrambler 5 scrambles the area including an A1 in 2 bytes and A2 in 2 bytes and all bits excluding 3x64 bytes followed by C1 byte (converting the first and second signals into either "1/0" alternating signals and "0/1" alternating signals, since scrambling a binary sequence will result in alternating binary values). Further, it is transmitted through a high speed optical interface 6 (time division multiplexing low speed frames). Signals received through a high speed optical interface 7 is synchronized at a frame synchronizing section 8 by using the unscrambled A1+A2 byte of 4 bytes, periodically resetting a scrambler 9. Essentially, Takatori's SDH transmission system is functionally equivalent to the claimed instant invention.)

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However, Takatori does not disclose *the mark rate in said third area mapped to said "1/0" alternating signals and said "0/1" alternating signals becomes 50%.*

Takahashi teaches an optical amplifier and optical transmission apparatus, which outputs based upon the restoration to an ordinary mark rate of about $\frac{1}{2}$ after an input signal exhibits a succession of "1" or a succession of "0" (See column 19, lines 19-24.) A mark rate of 50% is utilized in order to execute clock recovery and to realize frame synchronization of the SONET/SDH frame in the reception side.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the direct current balance of the transmission data signal as the 50% of Takahashi in the system of Takatori. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to ensure proper clock recovery and frame synchronization of a frame on the reception side.

Allowable Subject Matter

4. Claims 5 and 7 are allowed.

Response to Arguments

5. Applicant's arguments with respect to claims 1-4, 6, and 8 have been considered but are moot in view of the new ground(s) of rejection, as necessitated by the amendment to the independent claims.

Conclusion

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6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald L Mills/

September 7, 2007


CHI PHAM
SUPERVISORY PATENT EXAMINER
9/4/07